Self Assessment and Formative Evaluation of an Integrated Clinical Work Station project

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Background. The Integrated Clinical Work Station Project (ICWS) and the Electronic Patient Record Project (EPR) are strategic initiatives within the UK National Health Service (NHS). The long term goal is to promote the use of information and communications technology for the benefit of the patient; the specific ICWS/EPR projects started a research and development programme expected to continue well into the next century. Five distinct sites were chosen, three for ICWS and two for EPR.

A national evaluation project was initiated with respect to the ICWS/EPR projects; the remit was to assess progress at each site, and to abstract lessons from the site's experience for the wider NHS. The evaluation was undertaken by a multi-disciplinary group, comprising clinicians, economist, informaticians, management consultants, and social scientists. A formative evaluation approach was adopted, with a variety of methods and techniques being deployed. This paper concentrates on the form of evaluation undertaken by the Informaticians (SK, TM, HH) at one of the ICWS sites (AJ, DH).

Problem. The technical distinction between an ICWS and EPR concept was unhelpful to the five sites; the ICWS being seen as an integral front-end to an EPR. Indeed, the 'new' software was part of an incremental and pervasive development built upon existing hospital information systems.

The evaluators believe that the construction and embedding of software artifacts is a social as well as a technical endeavour. Their research question of 'usability', i.e. the extent to which the system is convenient and practical to use [1], therefore, had to consider the concept and context of a Total Patient Record [2], which included the relationship between paper and electronic resources of information. The Informatics evaluators, however, only had 8 days in total allocated for the evaluation at the Winchester site.

Approach. Given the time constraints, yet not forgetting the unique context of each site, the informaticians concocted a methodology from the literature [3] and previous research [4] which could be trialed at both ICWS and EPR sites. The methodology emphasised self assessment (S.A.) to permit the site's technical and clinical staff to reflect upon the progress being made in a number of inter-related dimensions; i.e. organisational, project, technical, and environmental. The evaluators provided a simple tool with an assessment example of how it was used, as the way of initiating the process and calibrating the assessment. The methodology also emphasised the need to use a formative evaluation (F.E.) for it was clearly a process that would need to continue beyond the limited time-frame of the evaluation project. The assessment would need to be informed by the local situation, and the tool customised by site people according to their specific requirements. Figure 1 shows Winchester's adaptation of the simple tool used by the S.A.F.E. methodology.

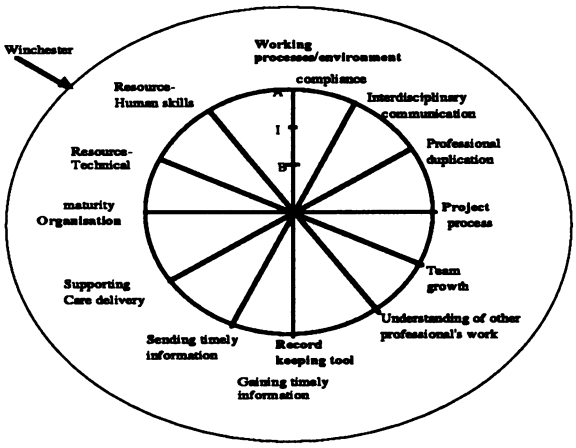

Figure 1: Customised, visual assessment profile.

Results. The methodology proved to be successful with respect to the Winchester site, and is now being tried at the other sites. Winchester have continued to use the method after the formal evaluation project, and have come to 'own' it, finding it a quick and useful means for both charting on-going assessment and for stimulating reflective learning within the development process.

References

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